
W P E R L H (TM)

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MPSrch_pp protein - protein database search, using Smith-Waterman algorithm

Run on: Thu Dec 23 10:12:52 1999; MasPar time 2.93 Seconds
Tabular output not generated. 81.927 Million cell updates/sec

Title: >US-09-177-843-2
Description: (1-6) from US09177843.pep
Perfect Score: 41
Sequence: 1 GRGESP 6

Scoring table: PAM 150
Gap 15

Searched: 122810 seqs, 40068593 residues

Post-processing: Minimum Match 0%
Listing first 45 summaries

Database: pir60
1:pir1 2:pir2 3:pir3 4:pir4

Statistics: Mean 18.365; Variance 18.068; scale 1.016

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	Query Match	Length	ID	Description	Pred. No.
1	41	100.0	625	2	A34615 profilaggrin - rat (f	2.82e+00
2	40	97.6	273	2	A28512 fibronectin - chicken	5.13e+00
3	40	97.6	1020	2	A29355 fibronectin - chicken	5.13e+00
4	40	97.6	2265	1	FNBO fibronectin - bovine	5.13e+00
5	40	97.6	2386	1	FNHU fibronectin precursor	5.13e+00
6	40	97.6	2477	2	S14428 fibronectin precursor	5.13e+00
7	40	97.6	2481	2	A43908 fibronectin - African	5.13e+00
8	39	95.1	316	2	F71338 probable ribose/galac	9.21e+00
9	39	95.1	425	2	S48469 probable membrane pro	9.21e+00
10	39	95.1	463	1	S74845 tldD homolog slr0863	9.21e+00
11	38	92.7	250	2	B35026 filaggrin B - mouse (1.64e+01
12	38	92.7	254	2	A31488 filaggrin A - mouse (1.64e+01
13	38	92.7	255	2	A35026 filaggrin precursor -	1.64e+01
14	38	92.7	313	2	A28444 hupK protein - Rhizob	1.64e+01
15	38	92.7	370	2	S27344 steroid 21-monooxygen	1.64e+01
16	38	92.7	492	2	A32525 hypothetical protein	1.64e+01
17	38	92.7	699	2	T01029 probable membrane pro	1.64e+01
18	38	92.7	953	2	S55156 hypothetical protein	1.64e+01
19	38	92.7	1095	2	T00329 SH2-containing inosit	1.64e+01
20	38	92.7	1189	2	JG6118 EPF autoantibody-reac	2.88e+01
21	37	90.2	72	2	A42856 DNA-binding protein 5	2.88e+01
22	37	90.2	825	2	JG4163 neural cell adhesion	2.88e+01
23	37	90.2	1265	2	A37967	

24 37 90.2 1272 2 S26180 neurofascin - chicken 2.88e+01
25 36 87.8 64 2 S17384 T-cell receptor beta 5.02e+01
26 36 87.8 165 1 S15194 ribosomal protein S10 5.02e+01
27 36 87.8 181 2 A69540 conserved hypotheticala 5.02e+01
28 36 87.8 235 2 B41326 nitrate hydratase (EC 5.02e+01
29 36 87.8 248 2 S23449 NADH oxidase (H2O2-fo 5.02e+01
30 36 87.8 490 2 A29782 unspecific monooxygen 5.02e+01
31 36 87.8 551 2 T01832 hypothetical protein 5.02e+01
32 36 87.8 657 2 S10001 Myd116 protein - mous 5.02e+01
33 36 87.8 715 2 B70741 probable moey protein 5.02e+01
34 36 87.8 831 2 S76235 hypothetical protein 5.02e+01
35 36 87.8 831 2 A41819 proline-rich peptides 5.02e+01
36 35 85.4 165 1 R3RT10 ribosomal protein S10 8.63e+01
37 35 85.4 165 1 S95918 ribosomal protein S10 8.63e+01
38 35 85.4 171 2 S15188 Xool protein - Africa 8.63e+01
39 35 85.4 704 2 S50448 1,4-alpha-glucan bran 8.63e+01
40 35 85.4 737 2 B70672 probable recG - Mycob 8.63e+01
41 35 85.4 891 2 JC6519 DNA topoisomerase (EC 8.63e+01
42 35 85.4 1134 1 A35955 meta-vinculin - human 8.63e+01
43 35 85.4 1135 1 A29997 meta-vinculin - chick 8.63e+01
44 35 85.4 1201 2 A35815 myosin heavy chain 1, 8.63e+01
45 35 85.4 2385 2 A32491 myosin heavy chain 1, 8.63e+01

ALIGNMENTS

RESULT 1
ENTRY A34615 #type fragment
TITLE profilaggrin - rat (fragment)
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 29-Jun-1990 #sequence_revision 09-Oct-1992 #text_change 10-Sep-1997
ACCESSIONS A34615
REFERENCE A34615
#authors Haydock, P.V.; Dale, B.A.
#journal DNA Cell Biol. (1990) 9:251-261
#title Filaggrin, an intermediate filament-associated protein: structural and functional implications from the sequence of a cDNA from rat.
#cross-references MUID:90274870
#accession A34615
#status preliminary
#molecule_type mRNA
#residues 1-625 #label HAY
#cross-references GB:M21759; NID:g204143; PID:g204144
#note the authors translated the codon GAA for residue 568 as Gln

KEYWORDS epidermis
SUMMARY #length 625 #checksum 6240
Query Match 100.0%; Score 41; DB 2; Length 625;
Best Local Similarity 100.0%; Pred. No. 2.82e+00;
Matches 6; Conservative 0; Mismatches 0; Indels 0; Gaps 0;
Db 126 GRGESP 131
QY 1 GRGESP 6
RESULT 2
ENTRY A28512 #type fragment
TITLE fibronectin - chicken (fragment)
ORGANISM #formal_name Gallus gallus #common_name chicken
DATE 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change 12-Feb-1999
ACCESSIONS A28512
REFERENCE A28512
#authors Kubomura, S.; Obara, M.; Karasaki, Y.; Taniguchi, H.; Gotoh, S.; Tsuda, T.; Higashi, K.; Ohsato, K.; Hirano, H.
#journal Biochim. Biophys. Acta (1987) 910:171-181
#title Genetic analysis of the cell binding domain region of the chicken fibronectin gene.
#cross-references MUID:88050950

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#accession A28512
##molecule_type DNA
##residues 1-273 ##label KUB
##cross-references GB:X06533; NID:G63393; PID:G295716
##note the authors translated the codon CCG for residue 190 as
      Gln, CAG for residue 243 as Glu, and GAG for residue
      246 as Gln

GENETICS
#introns 90/1; 129/1; 184/1; 236/1
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology;
      fibronectin type II repeat homology; fibronectin type III
      repeat homology
KEYWORDS alternative splicing; duplication; extracellular matrix;
      glycoprotein; heterodimer
FEATURE
  1-82 #domain fibronectin type III repeat homology (fragment)
      #label FN3I\
  90-172 #domain fibronectin type III repeat homology #label
      FN3N\
  167-169 #region cell attachment (R-G-D) motif\
  184-266 #domain fibronectin type III repeat homology #label FN3K
SUMMARY #length 273 #checksum 9875

Query Match 97.6%; Score 40; DB 2; Length 273;
Best Local Similarity 83.3%; Pred. No. 5.13e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 166 GRGDSP 171
   |||:|
QY 1 GRGESP 6

RESULT 3
ENTRY #type fragment
TITLE fibronectin - chicken (fragment)
ORGANISM #formal_name Gallus gallus #common_name chicken
DATE 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change
      12-Feb-1999
ACCESSIONS A29355
REFERENCE #authors Norton, P.A.; Hynes, R.O.
          #journal Mol. Cell. Biol. (1987) 7:4297-4307
          #title Alternative splicing of chicken fibronectin in embryos and in
          #cross-references MUID:88142820 normal and transformed cells.
          #accession A29355
          ##molecule_type mRNA
          ##residues 1-1020 ##label NOR

GENETICS 176/3
#introns
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology;
      fibronectin type II repeat homology; fibronectin type III
      repeat homology
KEYWORDS alternative splicing; duplication; extracellular matrix;
      glycoprotein; heterodimer
FEATURE
  1-86 #domain fibronectin type III repeat homology #label
      FN3H\
  92-177 #domain fibronectin type III repeat homology #label
      FN3I\
  180-262 #domain fibronectin type III repeat homology #label
      FN3J\
  257-259 #region cell attachment (R-G-D) motif\
  274-356 #domain fibronectin type III repeat homology #label
      FN3K\
  364-446 #domain fibronectin type III repeat homology #label
      FN3L\
  454-536 #domain fibronectin type III repeat homology #label
      FN3M\
  546-628 #domain fibronectin type III repeat homology #label
      FN3N\
  636-718 #domain fibronectin type III repeat homology #label
      FN3O\

#accession A28512
##molecule_type DNA
##residues 1-273 ##label KUB
##cross-references GB:X06533; NID:G63393; PID:G295716
##note the authors translated the codon CCG for residue 190 as
      Gln, CAG for residue 243 as Glu, and GAG for residue
      246 as Gln

GENETICS
#introns 90/1; 129/1; 184/1; 236/1
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology;
      fibronectin type II repeat homology; fibronectin type III
      repeat homology
KEYWORDS alternative splicing; duplication; extracellular matrix;
      glycoprotein; heterodimer
FEATURE
  1-82 #domain fibronectin type III repeat homology (fragment)
      #label FN3I\
  90-172 #domain fibronectin type III repeat homology #label
      FN3N\
  167-169 #region cell attachment (R-G-D) motif\
  184-266 #domain fibronectin type III repeat homology #label FN3K
SUMMARY #length 273 #checksum 9875

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Best Local Similarity 83.3%; Pred. No. 5.13e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 256 GRGDSP 261
   |||:|
QY 1 GRGESP 6

RESULT 4
ENTRY #type complete
TITLE fibronectin - bovine
ORGANISM #formal_name Bos primigenius taurus #common_name cattle
DATE 31-Dec-1988 #sequence_revision 31-Dec-1988 #text_change
      12-Feb-1999
ACCESSIONS A26452; B21165; A23292
REFERENCE #authors Skorstengaard, K.; Jensen, M.S.; Sahl, P.; Petersen, T.E.;
          #journal Eur. J. Biochem. (1986) 161:441-453
          #title Complete primary structure of bovine plasma fibronectin.
          #cross-references MUID:87054047
          #accession A26452
          ##molecule_type protein
          ##residues 1-2265 ##label SKO

REFERENCE A21165
#authors Kornblihtt, A.R.; Vibe-Pedersen, K.; Baralle, F.E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1983) 80:3218-3222
#title Isolation and characterization of cDNA clones for human and
      bovine fibronectins.
#cross-references MUID:83221567
#accession B21165
##molecule_type mRNA
##residues 2170-2265 ##label KOR
##cross-references GB:K00800
A23292
#authors Petersen, T.E.; Thøgersen, H.C.; Skorstengaard, K.;
          Vibe-Pedersen, K.; Sahl, P.; Sottrup-Jensen, L.; Magnusson,
          S.
#journal Proc. Natl. Acad. Sci. U.S.A. (1983) 80:137-141
#title Partial primary structure of bovine plasma fibronectin: three
      types of internal homology.
#accession A23292
##molecule_type protein
##residues 1-16,'C',18-20,'S',22-432;447-463;1367-1517;1567-1673;
      2062-2176,'N',2178-2265 ##label PET
COMMENT Cys-1201 and Cys-2015 have free sulfhydryl groups.
      The plasma fibronectin molecule consists of two chains, which are
      connected by disulfide bonds near the carboxyl ends. The chains
      partly differ due to the alternate splicing of mRNA.
COMMENT Fibronectins bind cell surfaces and various compounds including
      collagen, fibrin, heparin, DNA, and actin. Fibronectins are
      involved in cell adhesion, cell motility, opsonization, wound
      healing, and maintenance of cell shape.
COMMENT Plasma fibronectin is synthesized by hepatocytes.
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology;
      fibronectin type II repeat homology; fibronectin type III
      repeat homology
KEYWORDS acute phase; alternative splicing; collagen binding;
      duplication; extracellular matrix; glycoprotein; heparin
      binding; heterodimer; liver; phosphoprotein; plasma;
      pyroglutamic acid
FEATURE
  21-241 #domain fibrin and heparin binding #label FBN\
  21-56 #domain fibronectin type I repeat homology #label IF1\
  66-104 #domain fibronectin type I repeat homology #label IF2\
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110-148 #domain fibronectin type I repeat homology #label 1F3\
155-194 #domain fibronectin type I repeat homology #label 1F4\
200-239 #domain fibronectin type I repeat homology #label 1F5\
277-311 #domain collagen binding #label CBR\
329-370 #domain fibronectin type I repeat homology #label 1F6\
389-430 #domain fibronectin type II repeat homology #label 2F1\
439-477 #domain fibronectin type II repeat homology #label 2F2\
487-524 #domain fibronectin type I repeat homology #label 1F7\
530-568 #domain fibronectin type I repeat homology #label 1F8\
578-661 #domain fibronectin type III repeat homology #label 1F3A\
688-770 #domain fibronectin type III repeat homology #label 1F3B\
779-860 #domain fibronectin type III repeat homology #label 1F3C\
875-957 #domain fibronectin type III repeat homology #label 1F3D\
965-1046 #domain fibronectin type III repeat homology #label 1F3E\
1055-1134 #domain fibronectin type III repeat homology #label 1F3F\
1142-1227 #domain fibronectin type III repeat homology #label 1F3G\
1235-1318 #domain fibronectin type III repeat homology #label 1F3H\
1326-1404 #domain fibronectin type III repeat homology #label 1F3I\
1410-1517 #domain cell attachment #label CAD\
1416-1502 #domain fibronectin type III repeat homology #label 1F3J\
1493-1495 #region cell attachment (R-G-D) motif\
1510-1592 #domain fibronectin type III repeat homology #label 1F3K\
1600-1870 #domain heparin binding #label HB2\
1600-1682 #domain fibronectin type III repeat homology #label 1F3L\
1692-1773 #domain fibronectin type III repeat homology #label 1F3M\
1781-1863 #domain fibronectin type III repeat homology #label 1F3N\
1970-1972 #region cell attachment (R-G-D) motif\
1982-2062 #domain fibronectin type III repeat homology #label 1F3O\
1985-2216 #domain fibrin binding #label FB2\
2085-2124 #domain fibronectin type I repeat homology #label 1F10\
2130-2167 #domain fibronectin type I repeat homology #label 1F11\
2174-2209 #domain fibronectin type I repeat homology #label 1F12\
1 #modified_site pyrrolidone carboxylic acid (Gln) #status experimental\
3 #cross-link isopeptide (Gln) (interchain to fibrin) #status experimental\
21-47,45-56,66-94, 92-104,110-138, 136-148,155-184, 182-194,200-229, 227-239,277-304, 302-311,329-355, 343-370,389-415, 403-430,439-467, 465-477,487-514, 512-524,530-558, 556-568,2085-2114, 2112-2124, 2130-2157, 2155-2167, 2174-2206, 2198-2209 399,497,511,846, 976,1213,1987 1205.1692
#disulfide_bonds #status predicted\
#binding_site carbohydrate (Asn) (covalent) #status experimental\
#binding_site carbohydrate (Asn) (covalent) #status absent\

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1943,1944 #binding_site carbohydrate (Thr) (covalent) #status experimental\
2246 #disulfide_bonds interchain (to 2250) #status predicted\
2250 #disulfide_bonds interchain (to 2246) #status predicted\
2263 #binding_site phosphate (Ser) (covalent) #status experimental\
SUMMARY #length 2265 #molecular-weight 249556 #checksum 6613
Query Match 97.6%; Score 40; DB 1; Length 2265;
Best Local Similarity 83.3%; Pred. No. 5,13e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 1492 GRGSP 1497
Qy 1 GRGSP 6
RESULT 5 FNHU #type complete
ENTRY fibronectin precursor - human
TITLE fibronectin splice form ED-A
ALTERNATE_NAMES #formal_name Homo sapiens #common_name man
ORGANISM 27-Nov-1985 #sequence_revision 31-Mar-1993 #text_change
DATE 26-Feb-1999
ACCESSIONS A26460; A26284; S03917; A24854; A24476; A91008; A93529;
A21011; A90495; A22245; B22245; I65273; A21165; A92398;
S34791; A60904; A23901; A92386; A32517; S14357; A23891;
A03213; S10592
A26460
REFERENCE
#authors Dean, D.C.; Bowls, C.L.; Bourgeois, S.
#journal Proc. Natl. Acad. Sci. U.S.A. (1987) 84:1876-1880
#title Cloning and analysis of the promoter region of the human fibronectin gene.
#cross-references MUID:87175578
#accession A26460
#molecule_type DNA
#residues 1-49 #label DEA
#cross-references GB:M15801; NID:g182686; PID:g553293
A26284
REFERENCE
#authors Oldberg, A.; Ruoslahti, E.
#journal J. Biol. Chem. (1986) 261:2113-2116
#title Evolution of the fibronectin gene.
#cross-references MUID:86111901
#accession A26284
#molecule_type DNA
#residues 1447-1540 #label OLD
#cross-references GB:M12549; NID:g182688
#note the authors translated the codon TTC for residue 1494 as Glu
REFERENCE
#authors S00848
#journal Paolella, G.; Henchcliffe, C.; Sebastio, G.; Baralle, F.E.
#title Nucleic Acids Res. (1988) 16:3545-3557
#note Sequence analysis and in vivo expression show that alternative splicing of ED-B and ED-A regions of the human fibronectin gene are independent events.
#cross-references MUID:88233940
#accession S03917
#molecule_type DNA
#residues 1594-1767, 'V', 1769-1783 #label PAO
#cross-references EMBL:X0718; NID:g31402
#note the authors translated the codon AAC for residue 1631 as Asp
REFERENCE
#authors A24854
#journal Vibe-Pedersen, K.; Magnusson, S.; Baralle, F.E.
#title FEBS Lett. (1986) 207:287-291
#note Donor and acceptor splice signals within an exon of the human fibronectin gene: a new type of differential splicing.
#cross-references MUID:87030929
#accession A24854
#molecule_type DNA
#residues 1992-2147 #label VIB
#cross-references GB:X04530; NID:g31436
A24476
REFERENCE

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#authors Gutman, A.; Yamada, K.M.; Kornblitt, A.
#journal FEBS Lett. (1986) 207:145-148
#title Human fibronectin is synthesized as a pre-propolypeptide.
#cross-references MUID:87030890
#accession A24476
#status not compared with conceptual translation
#molecule_type mRNA
#residues 1-14, 'Q', 16-38 #label GUT
REFERENCE A91008
#authors Kornblitt, A.R.; Umezawa, K.; Vibe-Pedersen, K.; Baralle, F.E.
#journal EMBO J. (1985) 4:1755-1759
#title Primary structure of human fibronectin: differential splicing may generate at least 10 polypeptides from a single gene.
#cross-references MUID:85284965
#accession A91008
#status nucleic acid sequence not shown
#molecule_type mRNA
#residues 32-1344, 1346-2080; 2112-2386 #label KOR
#cross-references GB:X02761
REFERENCE A93529
#authors Kornblitt, A.R.; Vibe-Pedersen, K.; Baralle, F.E.
#journal Nucleic Acids Res. (1984) 12:5853-5868
#title Human fibronectin: cell specific alternative mRNA splicing generates polypeptide chains differing in the number of internal repeats.
#cross-references MUID:84272258
#accession A93529
#molecule_type mRNA
#residues 973-2080; 2112-2386 #label KO2
#cross-references GB:X00739
REFERENCE A21011
#authors Oldberg, A.; Linney, E.; Ruoslahti, E.
#journal J. Biol. Chem. (1983) 258:10193-10196
#title Molecular cloning and nucleotide sequence of a cDNA clone coding for the cell attachment domain in human fibronectin.
#cross-references MUID:83290929
#accession A21011
#molecule_type mRNA
#residues 1434-1537 #label OL2
#cross-references GB:K00055; NID:g182680; PID:g182683
REFERENCE A90495
#authors Bernard, M.P.; Kolbe, M.; Weil, D.; Chu, M.L.
#journal Biochemistry (1985) 24:2698-2704
#title Human cellular fibronectin: comparison of the carboxyl-terminal portion with rat identifies primary structural domains separated by hypervariable regions.
#cross-references MUID:85280409
#accession A90495
#molecule_type mRNA
#residues 1594-2386 #label BER
#cross-references GB:M10905; NID:g182696; PID:g182697
REFERENCE A22245
#authors Umezawa, K.; Kornblitt, A.R.; Baralle, F.E.
#journal FEBS Lett. (1985) 186:31-34
#title Isolation and characterization of cDNA clones for human liver fibronectin.
#cross-references MUID:85231203
#accession A22245
#molecule_type mRNA
#residues 1948-2067 #label UME
#cross-references GB:M27589; NID:g182705; PID:g182706
#accession B22245
#molecule_type mRNA
#residues 1975-1991; 2017-2039 #label UM2
#cross-references GB:M27590
REFERENCE A22394
#authors Sekiguchi, K.; Klos, A.M.; Kurachi, K.; Yoshitake, S.; Hakomori, S.
#journal Biochemistry (1986) 25:4936-4941
#title Human liver fibronectin complementary DNAs: identification of two different messenger RNAs possibly encoding the alpha and beta subunits of plasma fibronectin.

#cross-references MUID:87026578
#accession I65273
#status preliminary; translated from GB/EMBL/DBJ
#molecule_type mRNA
#residues 1978-1990, 2016-2018, 'N', 2020-2081, 2113-2127 #label SEK
#cross-references GB:M14060; NID:g182701; PID:g182704
REFERENCE A21165
#authors Kornblitt, A.R.; Vibe-Pedersen, K.; Baralle, F.E.
#journal Proc. Natl. Acad. Sci. U.S.A. (1983) 80:3218-3222
#title Isolation and characterization of cDNA clones for human and bovine fibronectins.
#cross-references MUID:83221567
#accession A21165
#molecule_type mRNA
#residues 2291-2386 #label KO3
#cross-references GB:K00799; NID:g182681; PID:g182684
REFERENCE A92398
#authors Garcia-Pardo, A.; Pearlstein, E.; Frangione, B.
#journal J. Biol. Chem. (1983) 258:12670-12674
#title Primary structure of human plasma fibronectin.
#cross-references MUID:84032463
#accession A92398
#molecule_type protein
#residues 32-47, 'C', 49-51, 'S', 53-72, 'A', 74-290 #label GAR1
REFERENCE S34791
#authors Garcia-Pardo, A.; Gold, L.I.
#journal Arch. Biochem. Biophys. (1993) 304:181-188
#title Further characterization of the binding of fibronectin to gelatin reveals the presence of different binding interactions.
#accession S34791
#molecule_type protein
#residues 291-300; 551-560 #label GAR2
REFERENCE A60904
#authors Griffin, C.A.; Calaycay, J.; Shively, J.E.; Smith, R.L.
#journal Thromb. Res. (1986) 43:469-477
#title Two plasma fibronectin fragments with different gelatin-binding properties.
#cross-references MUID:87019725
#accession A60904
#molecule_type protein
#residues 293-301 #label GRI
REFERENCE A23901
#authors Calaycay, J.; Pande, H.; Lee, T.; Borsi, L.; Sirl, A.; Shively, J.E.; Zardi, L.
#journal J. Biol. Chem. (1985) 260:12136-12141
#title Primary structure of a DNA- and heparin-binding domain (domain III) in human plasma fibronectin.
#cross-references MUID:86008277
#accession A23901
#molecule_type protein
#residues 616-677, 'Q', 679-703, 'PT' #label CAL
REFERENCE A92386
#authors Pierschbacher, M.D.; Ruoslahti, E.; Sundelin, J.; Lind, P.; Peterson, P.A.
#journal J. Biol. Chem. (1982) 257:9593-9597
#title The cell attachment domain of fibronectin. Determination of the primary structure.
#cross-references MUID:82265604
#accession A92386
#molecule_type protein
#residues 1441-1548 #label PIE
#note residues 1524-1527 are responsible for the cell-binding activity
REFERENCE A32517
#authors Garcia-Pardo, A.; Rostagno, A.; Frangione, B.
#journal Biochem. J. (1987) 241:923-928
#title Primary structure of human plasma fibronectin. Characterization of a 38 kDa domain containing the C-terminal heparin-binding site (Hep III site) and a region of molecular heterogeneity.
#cross-references MUID:87241275

Note: remainder of annotations omitted.

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Query Match          97.6%; Score 40; DB 1; Length 2386;
Best Local Similarity 83.3%; Pred. No. 5.13e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;

Db 1523 GRGDSF 1528
QY 1 GRGESP 6

RESULT 6
ENTRY S14428 #type complete
TITLE fibronectin precursor - rat
ORGANISM #formal_name Rattus norvegicus #common_name Norway rat
DATE 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 12-Feb-1999
ACCESSIONS S14428; S12455; A22319; S46203; S00459; A27252; I59049
REFERENCE S14428
#authors Hynes, R.O.
#submission submitted to the EMBL Data Library, July 1989
#accession S14428
#molecule_type mRNA
#residues 1-2477 #label HYN
#cross-references EMBL:X15906; NID:G56163; PID:G56164
REFERENCE S12455
#authors Schwarzbauer, J.E.; Patel, R.S.; Fonda, D.; Hynes, R.O.
#journal EMBO J. (1987) 6:2573-2580
#title Multiple sites of alternative splicing of the rat fibronectin gene transcript.
#cross-references MUID:88054951
#accession S12455
#status nucleic acid sequence not shown
#molecule_type mRNA
#residues 609-1810,'T',1812-2283 #label SCH
#cross-references EMBL:X15906
REFERENCE A22319
#authors Tamkun, J.W.; Schwarzbauer, J.E.; Hynes, R.O.
#journal Proc. Natl. Acad. Sci. U.S.A. (1984) 81:5140-5144
#title A single rat fibronectin gene generates three different mRNAs by alternative splicing of a complex exon.
#cross-references MUID:84298097
#accession A22319
#molecule_type DNA
#residues 2052-2237 #label TAM
REFERENCE S46203
#authors Falkenberg, C.; Enghild, J.J.; Thogersen, I.B.; Salvesen, G.; Akerstrom, B.
#journal Biochem. J. (1994) 301:745-751
#title Isolation and characterization of fibronectin-alpha (1)-microglobulin complex in rat plasma.
#accession S46203
#status preliminary
#molecule_type protein
#residues 1193-1192;'GLN',1268,'P',1270-1271,'D',1273,'CF',1276,'PY';1385-1399 #label FAL
REFERENCE S00459
#authors Patel, R.S.; Odermatt, E.; Schwarzbauer, J.E.; Hynes, R.O.
#journal EMBO J. (1987) 6:2565-2572
#title Organization of the fibronectin gene provides evidence for exon shuffling during evolution.
#cross-references MUID:88054950
#accession S00459
#molecule_type DNA
#residues 1-139;2382-2477 #label PAT
#cross-references EMBL:X05831
#note the authors translated the codon CCT for residues 51 and 94 as Ala
REFERENCE A27252
#authors Schwarzbauer, J.E.; Tamkun, J.W.; Lemischka, I.R.; Hynes, R.O.
#journal Cell (1983) 35:421-431
#title Three different fibronectin mRNAs arise by alternative

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#cross-references MUID:84082067
#accession A27252
#molecule_type mRNA
#residues 1586-1720,'T',1722,1813-2477 #label SC2
REFERENCE I59049
#authors Odermatt, E.; Tamkun, J.W.; Hynes, R.O.
#journal Proc. Natl. Acad. Sci. U.S.A. (1985) 82:6571-6575
#title Repeating modular structure of the fibronectin gene: Relationship to protein structure and subunit variation.
#cross-references MUID:86016741
#accession I59049
#status translated from GB/EMBL/DBDJ
#molecule_type DNA
#residues 1722-1810 #label RES
#cross-references GB:M11750; NID:G204164; PID:G554437
GENETICS 51/1; 94/1; 2416/3; 2454/3
#introns #superfamily fibronectin; fibronectin type I repeat homology; fibronectin type II repeat homology; fibronectin type III repeat homology;
CLASSIFICATION fibronectin type II repeat homology; fibronectin type III repeat homology
#keywords alternative splicing; cell adhesion; collagen binding; disulfide bond; duplication; extracellular matrix; glycoprotein; heterodimer
FEATURE
1-32 #domain signal sequence #status predicted #label SIG\
33-2477 #product fibronectin #status predicted #label MAR\
53-88 #domain fibronectin type I repeat homology #label 1F1\
98-136 #domain fibronectin type I repeat homology #label 1F2\
142-180 #domain fibronectin type I repeat homology #label 1F3\
187-226 #domain fibronectin type I repeat homology #label 1F4\
232-271 #domain fibronectin type I repeat homology #label 1F5\
308-342 #domain fibronectin type I repeat homology #label 1F6\
360-401 #domain fibronectin type II repeat homology #label 2F1\
420-461 #domain fibronectin type II repeat homology #label 2F2\
470-508 #domain fibronectin type I repeat homology #label 1F7\
518-555 #domain fibronectin type I repeat homology #label 1F8\
561-599 #domain fibronectin type I repeat homology #label 1F9\
609-692 #domain fibronectin type III repeat homology #label FN3A\
718-800 #domain fibronectin type III repeat homology #label FN3B\
809-890 #domain fibronectin type III repeat homology #label FN3C\
905-987 #domain fibronectin type III repeat homology #label FN3D\
995-1076 #domain fibronectin type III repeat homology #label FN3E\
1085-1164 #domain fibronectin type III repeat homology #label FN3F\
1172-1257 #domain fibronectin type III repeat homology #label FN3G\
1265-1348 #domain fibronectin type III repeat homology #label FN3H\
1356-1439 #domain fibronectin type III repeat homology #label FN3I\
1447-1529 #domain fibronectin type III repeat homology #label FN3J\
1537-1619 #domain fibronectin type III repeat homology #label FN3K\
1614-1616 #region cell attachment (R-G-D) motif\
1631-1713 #domain fibronectin type III repeat homology #label FN3L\
1721-1803 #domain fibronectin type III repeat homology #label FN3M\
1811-1893 #domain fibronectin type III repeat homology #label FN3N\
1903-1984 #domain fibronectin type III repeat homology #label FN3O\
1992-2074 #domain fibronectin type III repeat homology #label FN3P\
2181-2183 #region, cell attachment (R-G-D) motif\
2193-2273 #domain fibronectin type III repeat homology #label

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FN3Q\
#domain fibronectin type I repeat homology #label 1F10\
#domain fibronectin type I repeat homology #label 1F11\
#domain fibronectin type I repeat homology #label 1F12\
2296-2335
2341-2378
2385-2420
53-79,77-88,98-126,
124-136,142-170,
168-180,187-216,
214-226,232-261,
259-271,308-335,
333-342,360-386,
374-401,420-446,
434-461,470-498,
496-508,518-545,
543-555,561-589,
587-599,2296-2325,
2323-2335,
2341-2368,
2366-2378,
2385-2411,
2409-2420
2458
#disulfide_bonds #status predicted\
#disulfide_bonds interchain (to 2462) #status predicted\
#disulfide_bonds interchain (to 2458) #status predicted\
#length 2477 #molecular-weight 272510 #checksum 3043
SUMMARY
Query Match 97.6%; Score 40; DB 2; Length 2477;
Best Local Similarity 83.3%; Pred. No. 5.13e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 1613 GRGDSP 1618
Qy 1 GRGESP 6
RESULT 7
ENTRY
TITLE fibronectin - African clawed frog
ORGANISM #formal_name Xenopus laevis #common_name African clawed frog
DATE 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 12-Feb-1999
ACCESSIONS A43908
REFERENCE
#authors DeSimone, D.W.; Norton, P.A.; Hynes, R.O.
#journal Dev. Biol. (1992) 149:357-369
#title Identification and characterization of alternatively spliced fibronectin mRNAs expressed in early xenopus embryos.
#cross-references MUID:92111942
#accession A43908
#status nucleic acid sequence not shown; not compared with conceptual translation
#molecule_type mRNA
#residues 1-2481 ##label DES
##cross-references GB:M77820
#note sequence extracted from NCBI backbone (NCBIP:77473)
CLASSIFICATION #superfamily fibronectin; fibronectin type I repeat homology; fibronectin type II repeat homology; fibronectin type III repeat homology
duplication; extracellular matrix; glycoprotein; heterodimer
KEYWORDS
FEATURE
55-90
100-138
144-182
189-228
234-273
309-343
361-402
421-462
471-509
519-556
562-600
610-693
719-801
#domain fibronectin type I repeat homology #label 1F1\
#domain fibronectin type I repeat homology #label 1F2\
#domain fibronectin type I repeat homology #label 1F3\
#domain fibronectin type I repeat homology #label 1F4\
#domain fibronectin type I repeat homology #label 1F5\
#domain fibronectin type I repeat homology #label 1F6\
#domain fibronectin type II repeat homology #label 2F1\
#domain fibronectin type II repeat homology #label 2F2\
#domain fibronectin type I repeat homology #label 1F7\
#domain fibronectin type I repeat homology #label 1F8\
#domain fibronectin type I repeat homology #label 1F9\
#domain fibronectin type III repeat homology #label FN3A\
#domain fibronectin type III repeat homology #label FN3B\

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810-891
906-988
996-1077
1086-1165
1173-1258
1266-1349
1357-1440
1448-1530
1538-1620
1615-1617
1632-1714
1722-1804
1812-1894
1904-1985
1993-2075
2197-2277
2301-2340
2346-2383
2390-2425
55-81,79-90,
100-128,128-138,
144-172,170-182,
189-218,216-228,
234-263,261-273,
309-336,334-343,
361-387,375-402,
421-447,435-462,
471-499,497-509,
519-546,544-556,
562-590,588-600,
2301-2330,
2328-2340,
2346-2373,
2371-2383,
2390-2416,
2414-2425
2459
2463
SUMMARY
#disulfide_bonds #status predicted\
#disulfide_bonds interchain (to 2463) #status predicted\
#disulfide_bonds interchain (to 2459) #status predicted\
#length 2481 #molecular-weight 272716 #checksum 7955
Query Match 97.6%; Score 40; DB 2; Length 2481;
Best Local Similarity 83.3%; Pred. No. 5.13e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 1614 GRGDSP 1619
Qy 1 GRGESP 6
RESULT 8
ENTRY
TITLE F71338
ORGANISM #type complete
#formal_name Treponema pallidum subsp. pallidum #common_name syphilis spirochete
DATE 24-Jul-1998 #sequence_revision 24-Jul-1998 #text_change 17-Mar-1999
ACCESSIONS F71338
probable ribose/galactose ABC transporter, permease protein (rbcs-2) - syphilis spirochete

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REFERENCE A71250
#authors Fraser, C.M.; Norris, S.J.; Weinstock, G.M.; White, O.;
Sutton, G.G.; Dodson, R.; Gwinn, M.; Hickey, E.K.; Clayton,
R.; Ketchum, K.A.; Sodergren, E.; Hardham, J.M.; McLeod,
M.P.; Salzberg, S.; Peterson, J.; Khalak, H.; Richardson,
D.; Howell, J.K.; Chidambaram, M.; Utterback, T.; McDonald,
L.; Artach, P.; Bowman, C.; Cotton, M.D.; Fujii, C.;
Garland, S.; Hatch, B.; Horst, K.; Roberts, K.; Watthey,
L.; Weidman, J.; Smith, H.O.; Venter, J.C.
#journal Science (1998) 281:375-388
#title Complete genome sequence of Treponema pallidum, the syphilis
spirochete.
#cross-references MUID:98332770
#accession F71338
#status preliminary; nucleic acid sequence not shown;
translation not shown
##molecule_type DNA
#residues 1-316 ##label COL
#cross-references GB:AE001212; GB:AE000520; NID:g3322597; PID:g3322600
#experimental_source strain Nichols
GENETICS
#gene TP0323
SUMMARY
#length 316 #molecular-weight 33824 #checksum 4213
Query Match 95.1%; Score 39; DB 2; Length 316;
Best Local Similarity 83.3%; Pred. No. 9.21e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 298 GRGEAP 303
Qy 1 GRGESP 6
||||:|

RESULT 9
ENTRY S48469 #type complete
TITLE probable membrane protein Y1L103w - yeast (Saccharomyces
cerevisiae)
ORGANISM #formal_name Saccharomyces cerevisiae
DATE 02-Dec-1994 #sequence_revision 02-Dec-1994 #text_change
29-Jan-1999
ACCESSIONS S48469
REFERENCE S48455
#authors Bowman, S.; Churcher, C.
#submission submitted to the EMBL Data Library, September 1994
#accession S48469
##molecule_type DNA
#residues 1-425 ##label BOW
#cross-references GB:247047; EMBL:Z38125; NID:g603997; PID:g763243;
MIFS:Y1L103w
GENETICS
#map_position 9L
CLASSIFICATION #superfamily Archaeoglobus fulgidus conserved hypothetical
protein AF1803
FEATURES
transmembrane protein
KEYWORDS
155-171 #domain transmembrane #status predicted #label TM1\
334-350 #domain transmembrane #status predicted #label TM2
SUMMARY
#length 425 #molecular-weight 48310 #checksum 8020
Query Match 95.1%; Score 39; DB 2; Length 425;
Best Local Similarity 83.3%; Pred. No. 9.21e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 415 GRGETP 420
Qy 1 GRGESP 6
||||:|

RESULT 10
ENTRY S74845 #type complete
TITLE t1dD homolog slr0863 - Synecocystis sp. (strain PCC 6803)
ORGANISM #formal_name Synecocystis sp.
#variety PCC 6803

```

```

DATE 29-Jan-1999 #sequence_revision 29-Jan-1999 #text_change
01-Feb-1999
ACCESSIONS S74845
REFERENCE S74322
#authors Kaneko, T.; Sato, S.; Kotani, H.; Tanaka, A.; Asamizu, E.;
Nakamura, Y.; Miyajima, N.; Hirose, M.; Sugita, M.;
Sasamoto, S.; Kimura, T.; Hosouchi, T.; Matsuno, A.;
Muraki, A.; Nakazaki, N.; Naruo, K.; Okumura, S.; Shimpō,
S.; Takeuchi, C.; Wada, T.; Watanabe, A.; Yamada, M.;
Yasuda, M.; Tabata, S.
#journal DNA Res. (1996) 3:109-136
#title Sequence analysis of the genome of the unicellular
cyanobacterium Synecocystis sp. PCC6803. II. Sequence
determination of the entire genome and assignment of
potential protein-coding regions.
#cross-references MUID:97061201
#accession S74845
##molecule_type DNA
#residues 1-463 ##label KAN
#cross-references EMBL:D90909; GB:AB001339; NID:gl652844; PID:d1018539;
PID:gl652888
##note the nucleotide sequence was submitted to the EMBL Data
Library, June 1996
CLASSIFICATION #superfamily Escherichia coli t1dD protein
SUMMARY
#length 463 #molecular-weight 50369 #checksum 5364
Query Match 95.1%; Score 39; DB 1; Length 463;
Best Local Similarity 83.3%; Pred. No. 9.21e+00;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 352 GRGETP 357
Qy 1 GRGESP 6
||||:|

RESULT 11
ENTRY B35026 #type fragment
TITLE filaggrin B - mouse (fragment)
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 20-Jul-1990 #sequence_revision 06-Nov-1992 #text_change
10-Sep-1997
ACCESSIONS B35026
REFERENCE A35026
#authors Rothnagel, J.A.; Steinert, P.M.
#journal J. Biol. Chem. (1990) 265:1862-1865
#title The structure of the gene for mouse filaggrin and a
comparison of the repeating units.
#cross-references MUID:90130423
#accession B35026
##status preliminary
##molecule_type DNA
#residues 1-250 ##label ROT
#cross-references GB:M32301; NID:gl93311; PID:gl93312; GB:J05198
##note the authors translated the codon TCC for residue 159 as
Pro, GGC for residue 195 as Val, and CAA for residue
216 as His
KEYWORDS
epidermis
SUMMARY
#length 250 #checksum 8283
Query Match 92.7%; Score 38; DB 2; Length 250;
Best Local Similarity 83.3%; Pred. No. 1.64e+01;
Matches 5; Conservative 1; Mismatches 0; Indels 0; Gaps 0;
Db 186 GRGOSP 191
Qy 1 GRGESP 6
||||:|

RESULT 12
ENTRY A31488 #type complete
TITLE filaggrin - mouse
ORGANISM #formal_name Mus musculus #common_name house mouse
DATE 20-Jul-1989 #sequence_revision 20-Jul-1989 #text_change

```

cross